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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,535	08/18/2000	Dong-Ho Song	2101785-991100	6807

7590 11/06/2002

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EXAMINER

LE, DAVID Q

ART UNIT

PAPER NUMBER

3621

DATE MAILED: 11/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/641,535	SONG ET AL.
	Examiner David Q Le	Art Unit 3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-50 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-50 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on ____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in The Republic Of Korea on 12/31/1999. It is noted, however, that applicant has not filed a certified copy of the Korean application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-7, 10-44 and 47-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmad, US Patent No 5,925,127, in view of Liu, US Patent No 5,953,005.

As per claim 1:

Ahmad discloses a method and system for renting a software program in a distributed computing environment (Figs 1-2, related description) wherein the main computer program is downloaded to the client computer along with control files (Col 2, lines 15-25).

Liu discloses a system and method for providing access to digital media online which consists of downloading to a client computer a main file followed optionally by additional files (Abstract, Figs 1-3, Fig 4, related descriptions; Col 2, lines 15-36).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to have combined the multiple files download feature of Liu's invention with Ahmad's system to provide a more flexible and attractive software rental distribution system, allowing users to request, download, and pay for only the specific software modules they actually want to use. Such a system would have met all the limitations of claim 1:

wherein the rental software program includes a main executable file and optional files (Liu: Col 2, lines 15-36), comprising:

a user computer system including means for initially downloading the main executable file of the rental software program and means, if an optional file is missing, for automatically requesting one or more optional files contained in the rental software program (Liu: Abstract, Figs 1-3, Fig 4, related description; Col 2, lines 15-36); and

a server computer system for downloading the main executable file contained in the rental software program to be executed in said user computer system and means for automatically

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*downloading the one or more optional files as requested by said user computer system
(Ahmad: Figs 1-2; Liu: Abstract, Figs 1-3, Fig 4, related descriptions) .*

As per claims 10 and 21:

Liu discloses

A method [and computer-readable media] for renting a rental software program ...comprising:

performing a communication connection between a user computer system and a server computer system based on a user-transparent install-free technology (Figs 1-2, related description; Col 2, lines 15-33; note Col 2, lines 36- 39: "the user is completely unaware of the automatic delivery of an applet including data and instructions from a main database server");

displaying a list of rental software programs downloaded from the server computer system (Fig 2; Col 2, lines 39-40);

selecting the rental software program in the list of rental software programs (Fig 2; Col 2, lines 39-40);

downloading a main executable file associated with the rental software program from the server computer system to run a process corresponding to the main executable file (Fig 4, related description); and

if the process needs one or more optional files, downloading the one or more optional files from the server computer system (Fig 4, related description).

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to have combined *Liu's* multiple file download feature with *Ahmad's* software rental method to provide a dynamic software delivery system, wherein various modules of a software package may be delivered seamlessly and transparently to a client user, as each module is required. Such a system would also minimize storage demands on a user's computer system, as only the necessary software pieces would be downloaded from the server system.

As per claim 16:

Ahmad discloses that his system will comprise a downloaded file called "software monitor" (SM) that controls and monitors the use of the main application program downloaded to the user's computer. The actual authorization to access the application program is further contained in another downloaded file, called a "check-in check-out module" (CICO). Once the rented application program has been used and the authorization for its use has expired, the SM module will delete the CICO, thus rendering the rented program inaccessible to the user (Figs 3-4, 5A-5B; Block 670 in Fig 5B; related description; Col 14, lines 7-14). Ahmad teaches that deleting key files downloaded onto a user's computer is a good method for preventing unauthorized access and/or use of the rental software.

It would have been obvious to one ordinarily skilled in the art at the time the invention was made to implement a variation of *Ahmad's* method to a system of software rental/servicing that will comprise deleting the actual application program downloaded after it's been used. Such a variation would provide even stronger security because it would not leave any program code for a fraudulent user to attempt to hack into or copy. Such a system, combined with other features from *Liu's* invention, would meet all the limitations of claim 16, namely:

A method for servicing an install-free application in an online software rental system, comprising:

getting a list of applications available for a rental service from a server computer system (Liu: Fig 2);

establishing a rental session between a client computer system and the server computer system (Ahmad: Figs 1-2; Liu: Fig 1);

fetching one or more application software from a plurality of application software stored in the server computer system (Ahmad: Figs 1-2; Liu: Figs 1-2) ;

executing the one or more application software in the client computer system (Ahmad: Figs 5A-B; Liu: Figs 3-5) ;

and if said prior step is complete, flushing the one or more application software rented from the server computer system.

As per claims 27 and 36:

Both Ahmad and Liu disclose that the user's computer will serve as a means to select the software to be downloaded thus causing the software to be pulled from the server computer system. As such, Ahmad in view of Liu meet the limitations of claims 27 and 36:

A system for renting a rental software program in a distributed computing environment, wherein [27] the rental software program includes a main executable file and one or more optional files, [36] the system includes at least one client computer system and a server computer system and the rental software program includes a main executable file and one or more optional files, comprising:

a first means for pulling the main executable file out of a server computer system; and a second means for pulling the one or more optional files out of the server computer system.

As per claim 32:

Liu discloses that his system may, without prompting from the user, download files to the user's computer system while the session is ongoing (Liu: Col 2, lines 34-52), thus pushing files to the user's system. It would have been obvious to one ordinarily skilled in the art at the time the invention was made to have set up a system comprising such push technology, for the purpose of delivering additional content/information to a user's system while the user is involved in browsing or executing previously downloaded software. Such a system would meet the limitations of claim 32:

A system for providing a rental software program in a distributed computing environment, wherein the rental software program includes a main executable file and one or more optional files, comprising:

a first means for pushing the main executable file into a user computer system; and a second means for pushing the one or more optional files into the user computer system.

As per claim 42:

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Both *Ahmad* and *Liu* disclose servers that store software intended for view and download by users (*Ahmad*: Fig 1; *Liu*: Fig 1; related description). Both inventions also relate to fee-based application or multimedia software rental (*Ahmad*: Abstract, Col 8, line 58 – Col 9, line 15; *Liu*: Col 5, lines 13-17). Accordingly, and in view of the features already cited in the previous claims, *Ahmad* in view of *Liu* meet all the limitations of claim 42:

A server for renting a rental software program to a client computer, the server comprising:
means for storing a software program that is rentable by a user, the software program including a main executable file and one or more optional files;
means for downloading the main executable file in response to a user's request to rent the software program; and
means for automatically streaming the one or more optional files associated with the main executable file down to the user's computer when requested by the client computer, wherein the server implements an install fee, user transparent rental technique since the optional files are automatically downloaded to the client computer as needed.

As per claim 47:

Ahmad in view of *Liu* meet all the limitations of this claim as applied to the client portion of the system, based on the same citations used in claim 42 as well as previous claims above:

A client for renting a software program in a distributed computing environment, wherein the rental software program includes a main executable file and optional files, comprising:
means for requesting a rental software program from the server;
means for receiving the main executable file of the software program from the server;
means for determining that an optional file is required by the main executable file;
means for requesting the optional file from the server;
and means for receiving the optional file.

As per claims 2, 28, 37 and 48:

Ahmad in combination with *Liu* disclose all the limitations recited in these claims, for a system further comprising:

*a storage means for storing the main executable file, ..optional files ..and a list of optional files downloaded from said server computer system (*Ahmad*: Fig 1, related description);*

*a process manager means further comprising means for creating and running a process corresponding to the main executable file, means for suspending the process if the process requests one or more optional files, and means for re-starting the process if said process manager means receives the one or more optional files computer system (*Ahmad*: Figs 3-4, related description; Col 3, line 20 – Col 4, line 37; Col 9, line 38 – Col 10, line 49); and*

*a monitor means for monitoring the process to determine whether the process requests the one or more optional files, and further comprising means for intercepting a message requesting the one or more optional files from the process (*Liu*: Figs 4, 9-10, related description; Col 2, lines 56-60; Cols 5 – 8),*

*and means for automatically requesting the one or more optional files to said server computer system (*Liu*: Figs 4, 9-10, related description; Col 2, lines 56-60; Cols 5 – 8).*

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It would have been obvious to one ordinarily skilled in the art at the time the invention was made to combine the cited features of *Ahmad's* and *Liu's* inventions to provide a flexible, interactive, and attractive system for renting software to users via online communications channels.

As per claims 3 and 43:

Ahmad discloses that optional files sent with the downloaded main program may include control files that may be implemented as DLL (dynamic-link library) or OCX (Active X/OLE) files (*Ahmad*: Col 10, lines 39-49). *Ahmad* teaches that "*the mechanism for downloading and launching [files] from the Internet is well known to those skilled in the art*". While neither *Ahmad* nor *Liu* specifically mentions files stored in the registry of a user's system, it would have been obvious to one ordinarily skilled in the art that in order for files to be called and executed or used within a process, a list of those files would have had to be downloaded from the server and stored in the user system's registry. As such, *Ahmad* in view of *Liu* meet all the limitations of claims 3 and 43:

[A] system wherein the server computer system further comprises means for sending the list of optional files to said user computer system when said server computer sends the main executable file to said user computer system and wherein the optional files includes a registry file.

As per claims 4, 29, 38 and 49:

Ahmad discloses

[a] system ... wherein said user computer system further includes: protection means for protecting the rental software program rented from said server computer system to prevent an unauthorized use committed by said user computer system (*Ahmad*: Fig 3 – 5B, related description); and

a billing database for storing billing information (*Ahmad*: Figs 5A-5B, related description).

Neither *Ahmad* nor *Liu* specifically disclose

a converting means for converting registry file information contained in the list of optional files into registry file information appropriate to said user computer system;

However it would have been obvious to one ordinarily skilled in the art at the time the invention was made that both *Ahmad's* and *Liu's* inventions were targeted at user computer systems comprising many different operating systems (i.e. Windows/Intel, Apple Macintosh, Unix/Linux, etc.). Since the communications network utilized by all those systems include the World Wide Web and Internet, and also in view of the fact that *Liu's* system utilized Java applets (a universally usable technology) to deliver software, it would have been inherent that the capability to convert such downloaded files for use on different user computers would have been necessary. As a result, any system built using a combination of *Ahmad's* and *Liu's* inventions would have had to incorporate this limitation.

As per claims 5, 30, 39 and 50:

Ahmad discloses

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[a] system ... wherein the billing information includes a billing start time, a billing end time and .. the rental software program selected by said user computer system (Ahmad: Figs 5A-5B, related description; Col 11, lines 27-42).

As per claims 6, 31 and 40:

As per claims 16 and 21 above, Ahmad teaches a method of deleting critical authorization files in order to deny access and use of the downloaded software. It would have been obvious for one ordinarily skilled in the art at the time the invention was made to implement a variation of Ahmad's method to a system of software rental/servicing that will comprise deleting the actual application program downloaded after it's been used. Such a variation would provide even stronger security because it would not leave any program code for a fraudulent user to attempt to hack into or copy. Such a system, combined with other features from Liu's invention, would meet all the limitations of claims 6,31 and 40:

A system... wherein said process manager means further comprising means for flushing the main executable file and the one or more optional files stored in said storage means when the process is complete based on the registry file information.

As per claims 7, 35, 41 and 44:

Ahmad and Liu disclose that their system's servers include:

a verification means for verifying said user computer system by using identification information of said user computer system stored in a user-information database (Ahmad, Figs 1-2, Liu: Figs 1, 4-5; related description);

a program database for storing path information of the main executable file, a list of rental software programs and a list of the optional files (Ahmad, Figs 1-2, Liu: Figs 1, 4-5; related description);

an analyzing means for analyzing a new rental software program when the new rental software program is installed in said server computer system, wherein said analyzing means further comprises means for storing the path information of the main executable file and a list of the optional files, associated with the new rental software program, in said program database (Ahmad: Fig 3, Col 9, lines 16-37; Liu: Figs 1-4, related description);

a storage means for storing the main executable file and the one or more optional files; and a means for obtaining and sending the main executable file stored in said storage means when said user computer system selects the desirable rental software program (Ahmad, Figs 1-3, Liu: Figs 1, 4-5; related description); and

means for obtaining and sending the one or more optional files stored in said storage means when said user computer system optionally requests the one or more optional files to said server computer system (Ahmad, Figs 1-2, Liu: Figs 1, 4-5; related description).

As per claims 11 and 22:

Both Ahmad and Liu disclose authentication of users prior to delivery of software and services:

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The method [and computer-readable media] ... wherein establishing the communications further comprises: performing the communication connection between the user computer system and the server computer system; and verifying the user computer system in the server computer system (Ahmad: Figs 3-5B, related description; Liu: Figs 4-5, related description).

As per claims 12 and 23:

The limitations of these claims are all met by *Ahmad* in view of *Liu*:

The method [and computer-readable media]... wherein downloading the file further comprises: downloading the main executable file and a list of optional files from the server computer system, wherein the optional files include a registry file (as per claims 3 and 43);

converting registry file information contained in the list of optional files into registry file information appropriate to the user computer system (as per claims 4, 29, 38 and 49) and;

running a file monitor and a protector, which protects the rental software program including the main executable file and the one or more optional files from an unauthorized use committed by the user computer system (as per claims 2, 18, 37, and 48);

storing a name of the rental software program selected by the user computer system and a billing start time in a billing information database of the user computer system; informing the server computer system of the billing start time (as per claims 5, 30, 39 and 50); and

creating and running the process corresponding to the main executable file (Ahmad, Figs 5A-B; Liu, Figs 3-5, 7-10, related description).

As per claims 13 and 24:

Liu discloses that files downloaded with a main program to the user's computer system have the capability to control the execution of said program, including fetching additional files as needed, inserting them into the execution of the main program, synchronizing them, streaming the data as needed (Fig. 4, Box 88, related description). It would have been obvious to one ordinarily skilled in the art at the time the invention was made that to make this possible would require the use of interrupt calls to the customer's system, and to have set up the system with the same limitations as cited by claims 13 and 24:

*[A] method [and computer readable media] ... wherein downloading the optional files further comprising: monitoring the process in the file monitor in order to determine whether the process needs the one or more optional files;
if the process needs the one or more optional files, hooking a message requesting the one or more optional files from process;
suspending the process until the user computer system downloads the one or more optional files from the server computer system; and if the user computer system downloads the one or more optional files from the server computer system, re-running the process.*

As per claims 14 and 25:

Liu discloses

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[A] method [and computer readable media] ...wherein the process completion step further comprises:
determining whether the process has been complete;
if the process has been complete, performing a procedure accompanying a process completion;
determining whether the user computer system wants to select another rental software program;
if the user computer system wants to select the another rental software program, repeating the steps to download the optional files; and
if the user computer system does not want to select the another rental software program, terminates the communication connection between the user computer system and the server computer system (Figs 4-5, 7-10, related descriptions).

As per **claims 15 and 26:**

Ahmad discloses

[A] method [and computer-readable media]...wherein the process completion step further comprises:
if the process has been complete, terminating the file monitor and the protector;
storing a billing end time in the billing information database of the user computer system;
informing the server computer system of the billing end time; and
flushing the main executable file and the one or more optional files stored in the storage device of the user computer system (Figs 5a-5B, related description; see rejection of claim 16 above).

As per **claims 17, 18, 19:**

Ahmad and Liu both disclose the limitations cited in these claims:

The method as recited in claim 16, wherein the list of applications is established on Internet (Ahmad: Col 4, lines 38-40; Liu: Abstract).

The method as recited in claim 16, wherein the one or more application software include a main executable file (see claim 1 and others above).

The method as recited in claim 16, wherein the one or more application software is authorized by the server computer system (see claims 11 and 22 above).

As per **claim 20:**

This claim is rejected per the same rationale used on claims 2, 28, 37, and 48 above:

The method ... further comprises:
creating a process corresponding to the main executable file;
running the process;
monitoring additional requests to access related files from the process by message hooking and file monitoring while the process is running;
if the process needs any related file, generating a message requesting one or more related files and transmitting the message to the server computer system to fetch the one or more related files based on an on-demand scheme; and

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re-running the process after the one or more related files are delivered to the client computer system.

As per claims 33 and 34:

Liu discloses that content may be automatically pushed to the customer's computer system once connection is established (Col 6, lines 18-27). As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made that this capability would lend itself perfectly to advertising, promotion, or delivery of free software to customers' systems. A system built using these teachings would have met with all the limitations of claims 33 and 34:

*[A] system ... wherein said first and second means are intended for advertisement.
[A] system ... wherein said first and second means are intended for freeware.*

4. Claims 8-9 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmad in view of Liu and further in view of Crawford, US Patent No 6,327,579.

As per claims 8 and 45:

Ahmad and Liu are silent on the subject of logs being kept for billing purposes at the host site of their inventions. It would have been obvious to one ordinarily skilled in the art at the time the invention was made that such logs would have to be inherent in both Ahmad's and Liu's systems. However Crawford is explicit in such logs being kept and will be used as further prior art in the following claims:

[A] system as recited..., wherein said server computer system further includes:

a billing means for processing charge or fee to be paid for the usage of the main executable file and the one or more optional files associated with the rental software program provided to said user computer system (Crawford: Figs 18, 21A, 21C, 21D, 21E, 21F, related description);

a log database for storing a log file necessary for recovering said server computer system when said server computer system is not operable due to a serious error (Crawford: Abstract; Col 8, lines 28-38: Crawford discloses that client's data/application software may be backed up and restored in case of catastrophic failure. It would have been obvious to one ordinarily skilled in the art at the time the invention was made that such backup and restore procedures would have been implemented for the host data, operating systems, rental application programs and optional files as well);

a recovery means for recovering said server computer system by using the log file stored in said log database when said server computer system is not operable due to the serious error (same as above);

a schedule management means for managing a schedule of computer system and another user requests from said user computer system (all three cited inventors target their inventions at multiple users, who will simultaneously log in to host servers and make requests for application software, optional files, and other services. It would have been obvious to one ordinarily skilled in the art at the time the invention was made that a schedule management means would have been inherently incorporated at the host site, in order to efficiently manage the delivery of such software and services in real time); and

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a session management means for managing a communication session between said user computer system and said server computer system (same as above).

As per claims 9 and 46:

The limitations cited in these two claims were addressed above for claims 3 and 43 and the claims are rejected on the same basis:

[A] system ..wherein said server computer system sends the list of optional files to said user computer system when said server computer system sends the main executable file to said user computer system and wherein the optional files includes a registry file.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Le whose telephone number is 703-305-4567. The examiner can normally be reached on 8:30am-5:30pm Mo-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P Trammell can be reached on 703-305-9768. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

DQL
November 4, 2002

JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600